TRANSMITTAL OF INFORMATION DISCLOSURE STATEMENT (Under 37 CFR 1.97(b) or 1.97(c))	Docket No. 02007(16792)

In Re Application: Xiaodong Wang

[stamp: OIPE JC10 NOV 0 5 2003 PATENT & TRADEMARK OFFICE]

Serial No. 10/631.991	Filing Date July 31, 2003	Examiner Unassigned	Group Art Unit Unassigned

NEAR-OPTIMAL MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) CHANNEL DETECTION VIA SEQUENTIAL MONTE CARLO

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(Only complete if Applicant elects to pay the fee set forth in 37 CFR 1.17(p))

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Ralph F. Hoppin
    Signature

Dated: **November 3, 2003**

Ralph F. Hoppin
Registration No.: 38,494

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cc: **RFH:rjl**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant:	Xiaodong Wang	**Examiner:**	Unassigned
Serial No.:	10/631,991	**Group Art Unit:**	Unassigned
Filed:	July 31, 2003	**Docket:**	02007 (16792)
For:	NEAR-OPTIMAL MULTIPLE-INPUT MULTIPLE-OUTPUT (MIMO) CHANNEL DETECTION VIA SEQUENTIAL MONTE CARLO	**Dated:**	November 3, 2003

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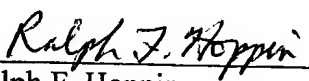
INFORMATION DISCLOSURE STATEMENT

Sir:

In accordance with 37 C.F.R. §§ 1.97 and 1.98, it is requested that the following references, which are also listed on the attached Form PTO-1449, be made of record in the above-identified case.

1. G.J. Foschini and M.J. Gans, On Limits of Wireless Communications in a Fading Environment when Using Multiple Antennas, *Wireless Personal Commun.*, 6(3):311–335, 1998;

2. I.E. Telatar, Capacity of Multi-antenna Gaussian Channels, *Eur. Trans. Telecommun.*, 10(6):585–595, Nov. 1999;

CERTIFICATE OF MAILING UNDER 37 C.F.R. §1.8(a)

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: Commissioner for Patents Alexandria, VA 22313-1450 on November 3, 2003.

Dated: November 3, 2003

Ralph F. Hoppin

3. C.N. Chuah, D.N.C. Tse, J.M. Kahn, and R.A. Valenzuela, Capacity Scaling in MIMO Wireless Systems Under Correlated Fading, *IEEE Trans. Inform. Theory*, 48(3):637–650, Mar. 2002;

4. P.W. Wolniansky, G.J. Foschini, G.D. Golden, and R.A. Valenzuela, V-BLAST: An Architecture for Realizing Very High Data Rates Over the Rich-Scattering Wireless Channel, In *Proc.1998 Int. Symp. Sig. Sys. Elect. (ISSSE'98)*, Pisa, Italy, Sep. 1998;

5. G.J. Foschini, Layered Space-Time Architecture for Wireless Communication in a Fading Environment When Using Multi-Element Antennas, *Bell Labs, Tech. J.*, 1(2):41–59, 1996;

6. G.D. Golden, G.J. Foschini, R.A. Valenzuela, and P.W. Wolniansky, Detection algorithm and initial laboratory results using V-BLAST space-time communication architecture, *Elect. Let.*, 35:14–16, Jan. 1999;

7. O. Damen, A. Chkeif, and J. Belfiore, Lattice Code Decoder for Space-Time Codes, *IEEE Commun. Let.*, 4(5):161–163, May 2000;

8. B.M. Hochwald and S.T. Brink, Achieving Near-Capacity on a Multiple-Antenna Channel, *Submitted to IEEE Trans. Commun.*, Apr. 2002;

9. A.M. Chan and I. Lee, A New Reduced-Complexity Sphere Decoder For Multiple Antenna Systems, In *Proc. 2002 Int. Commun. Conf. (ICC'02)*, New York, N.Y., Apr. 2002;

10. A. Doucet, N. deFreitas, and N.J. Gordon (eds.), *Sequential Monte Carlo Methods in Practice*, New York: Springer-Verlag, 620pp., 2001;

11. X. Wang, R. Chen, and J.S. Liu, Monte Carlo Bayesian Signal Processing for Wireless Communications, *J. VLSI Sig. Proc.*, 30(1-3):89–105, Jan.-Feb.-Mar. 2002;

12. R. Chen, X.Wang, and J.S. Liu, Adaptive Joint Detection and Decoding in Flat-Fading Channels via Mixture Kalman Filtering, *IEEE Trans. Info. Theory*, 46(6):2079–2094, Sep. 2000;

13. J.S. Liu and R. Chen, Sequential Monte Carlo Methods for Dynamic Systems, *J. Amer. Stat. Assoc.*, 93:1302–1044, 1998;

14. R. Chen and J.S. Liu, Mixture Kalman filters, *J. Amer. Stat. Assoc. (B)*, 62:493–509, 2000;

15. Z. Yang and X. Wang, A Sequential Monte Carlo Blind Receiver for OFDM Systems in Frequency-Selective Fading Channels, *IEEE Trans. Sig. Proc.*, 50(2):271–280, Feb. 2002;

16. A.M. Tonello, On Turbo Equalization of Interleaved Space-Time Codes, *In Proc. 2001 Fall Vehi. Tech. Conf. (VTC-fall'01)*, Oct. 2001;

17. H. Dai and A.F. Molisch, Multiuser Detection for Interference-Limited MIMO Systems, In *Proc. 2001 Spring Vehi. Tech. Conf. (VTC-spring'01)*, May 2002;

18. M. Sellathurai and S. Haykin, TURBO-BLAST for Wireless Communications: Theory and Experiments, *IEEE Trans. Sig. Proc.*, 50(10):2538–2546, Oct. 2002;

19. X. Wang and H.V. Poor, Iterative (Turbo) Soft Interference Cancellation and Decoding for Coded CDMA, *IEEE Trans. Commun.*, 47(7):1046–1061, Jul. 1999;

20. L.R. Bahl, J. Cocke, F. Jelinek, and J. Raviv, Optimal Decoding of Linear Codes for Minimizing Symbol Error Rate, *IEEE Trans. Info. Theory*, 20(3):284–287, Mar. 1974;

21. T.L. Marzetta, BLAST Training: Estimating Channel Characteristics for High Capacity Space-Time Wireless, *In Proc. 37th Annual Allerton Conf. Commun., Compu., & Control*, Sep.1999;

22. Q. Sun, D.C. Cox, A. Lozano, and H.C. Huang, Training-Based Channel Estimation for Continuous Flat Fading BLAST, In *Proc. 2002 Int. Conf. Commun. (ICC'02)*, New York, N.Y., Apr. 2002;

23. A. Doucet, S.J. Godsill, and C. Andrieu, On sequential Monte Carlo sampling methods for Bayesian filtering, *Stat. & Comp.*, 10(3):197–208, 2000;

24. N.J. Gordon, D.J. Salmond, and A.F.M. Smith, Novel approach to nonlinear non-Gaussian Bayesian state estimation, *In 1993 IEE Proc., F. Radar Sonar and Navigations*, 140(2), Apr. 1993; and

25. G. Kitagawa, Monte Carlo Filter and Smoother for Non-Gaussian Nonlinear State Space Models, *J. Comput. Graph. Statist.*, 5(1):1–25, 1996.

Applicants are submitting copies of the above-cited references.

Inasmuch as this Information Disclosure Statement is being submitted in

accordance with the schedule set out in 37 C.F.R. §1.97(b), no statement or fee is required.

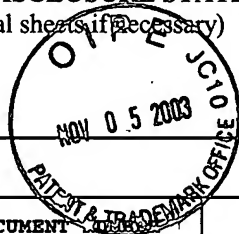Respectfully submitted,

Ralph F. Hoppin
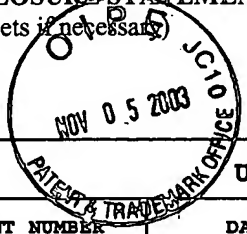
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RFH:rjl

INFORMATION DISCLOSURE STATEMENT
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Atty. Docket No. 02007 (16792)	Serial No. 10/631,991
Applicant Xiaodong Wang	
Filing Date July 31, 2003	Group Unassigned

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U.S. PATENT DOCUMENTS

EXAMINER's INITIAL*		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE (if appropriate)

FOREIGN PATENT DOCUMENTS

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OTHER PRIOR ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	G.J. Foschini and M.J. Gans, On Limits of Wireless Communications in a Fading Environment when Using Multiple Antennas, *Wireless Personal Commun.*, 6(3):311-335, 1998
	I.E. Telatar, Capacity of Multi-antenna Gaussian Channels, *Eur. Trans. Telecommun.*, 10(6):585-595, Nov. 1999
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EXAMINER	DATE CONSIDERED

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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Atty. Docket No. 02007 (16792)	Serial No. 10/631,991
Applicant Xiaodong Wang	
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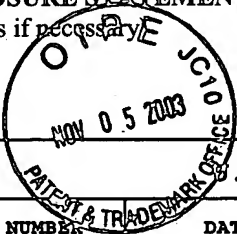|		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES	NO
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